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ABSTRACT

To determine whether the daily mother-infant separation involved in day care adversely affects children's emotional development, follow-up data on emotional development were compared for preschool children in day care and their home-reared counterparts. Follow-up assessments were done in the home at approximately age 3-1/2 for ten white middle class children who had been in infant day care from approximately 1 year of age and for 13 home-reared children. Measures included observations and tape recordings of mother-child interaction in structured situations, a semi-structured maternal interview which was tape recorded, and some standardized language tests. No differences were found between the two groups for the frequency and intensity of behavior problems, separation reactions, greeting responses to mothers after an hour's separation, or for anxiety manifested during testing. Significant group differences were found for compliance and temper tantrums, with day care children being less compliant with their mothers' requests to complete a boring task and exhibiting more temper tantrum behavior than the home reared children. These differences were interpreted as supporting the hypothesis that the day care children were somewhat delayed in their negotiation of autonomy from their mothers. Data on the degree to which social interactions in day care at 18 months were predictive of later emotional development are also presented. (JMB)

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A Two Year Follow up of Infants in Community Based Infant Day Care

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Because of contradictory findings in the literature, the effects of infant day care continue to be questioned. In planning our study, we had 3 goals in mind: (1) To study 5 community based infant day care centers, assumed to be more representative of what is generally available than are university based research centers; (2) To focus on various aspects of emotional development; and (3) To examine the predictiveness of experiences in infant day care for later functioning.

In considering what aspects of emotional development might be important, we were guided by the hypothesis that early stress may make it more difficult for the child to negotiate the developmental issue that is normally appropriate for his age. By age 3 1/2 to 4, the age-specific developmental issue with which the child is normally expected to have come to terms is the striving for "autonomy" (Erikson, 1959). Central to this issue is the child's effort to have his own way, to test limits, to carve out areas of autonomy from his mother's control. The mother's task is to respond to the child's efforts in ways which allow for friendly negotiating for some areas of control for the child while retaining for herself other areas of control. The successful resolution of this issue is important for the child's ultimate autonomy and for his self-esteem. We explored the hypothsis that attendance in day care may delay the negotiation of this developmental issue by making it more difficult for the mother to set limits appropriately, or by making the child more insistent and/or more angry if separation affects his basic security with his mother.

A second focus in our examination of emotional development was the frequency

and intensity of behavior problems that typically cause children to be referred for psychotherapy. Our hypothesis was that if emotional development is adversely affected by daily mother-infant separation, day care children should show more frequent or intense behavior problems.

Among our other measures was the child's greeting response to the mother after a brief separation, because that measure has been found by some studies to differentiate day care and mother reared infants.

We studied ten white middle class children who had been in infant day care from about 1 year of age. Most had remained in the same centers until follow-up. Their experiences in infancy have been compared in detail with those of their 13 home-reared counterparts, and this phase of the study is published elsewhere. Briefly, the infant day care experience was found to be quite positive in terms of care-giver infant interaction, observable infant affect, and infant behavior with peers and with inanimate objects.

The assessments on follow-up took place in the home at about age 3 1/2 years, and included observations and tape recordings of mother-child interaction in structured situations, a previously validated, semi-structured maternal interview which was tape recorded, and some standardized language tests. Raters of the clinical material were unfamiliar with the observational data, unfamiliar with the previous data on the subjects as infants, and as much as possible unfamiliar with the rearing status of the child.

Overall, we found few significant differences in the emotional development of 2 groups of infants. There were no differences on the Behavior Problem Scale, and the means of both groups were below the critical score found by Richman and Graham

to distinguish clinical and non-clinical populations. Thus, the overall level of behavior problems in both groups was within the normal range. The 2 groups were also similar in separation reactions and in their greeting responses to their mothers after an hour's separation with an unfamiliar adult who administered the formal tests; they were also similar in anxiety manifested during testing.

Significant group differences supported our hypothesis of some delay in the resolution of the immediately preceding developmental issue, the negotiation of autonomy from mother. Specifically, the day care children more often refused to comply with their mother's request to complete a boring repetitious task, sorting a pile of red and white pegs into different boxes. Moreover, mothers of day care children reported more temper tantrums. Noncompliance to mother's requests to complete the boring task and temper tantrums are both more characteristic of 2 year old behavior. The mothers of the day care children, perhaps in response to their children's greater noncompliance, were observed to make significantly greater efforts to elicit compliance in the forms of inventing games or helping with the task.

We feel that non-compliance in this study did not reflect a more mature assertion of individuality, but rather a more anxious and less competent child. This conclusion derives from relationships between compliance and other child measures examined in the sample of 23 as a whole. For example, children who complied less greeted their mothers less positively after separation, manifested significantly more separation distress, and had significantly more behavior problems.

Our speculation is that our finding of home-day care differences in compliance and in temper tantrums are a function of subtle differences in mother-child interaction around issues of control. While our ratings did not reveal global

group differences in maternal control, the only two mothers who allowed their children to leave the table before finishing the task were in the day care group, as was the most overcontrolling mother. For some mothers, daily separation may increase maternal permissiveness to avoid confrontation; for other mothers, daily separation may produce overcontrol as a response to increased maternal anxiety.

We were interested in the extent to which toddler functioning or social interactions in day care at 18 months were predictive of later emotional development. We examined individual differences in five dimensions of early experience in relation to later outcome variables. Based on previous work with these measures (Rubenstein & Howes, 1979) we expected infant competence, positive infant and adult affect and adult positive stimulation to be facilitative of development, while adult negative affect and restrictiveness were expected to be negatively related to optimal development. The measures of experiences at 18 months were obtained in the day care centers for the day care group, and in the homes of the home-reared comparison sample. These represented the natural environments in which the children spent most of their day at 18 months of age.

Our findings suggest that a positive greeting response upon reunion with mother at age 3 1/2 is less a function of whether the child had been in day care or at home, but more a function of the extent to which the day care experience was a positive one for him/her. Infants who were observed to be happier in day care and who had had more playful, more facilitative and less intrusive interactions with day care caregivers greeted their mothers more positively two years later. Moreover, a more positive greeting to mother in reunion at 3 1/2 reflected a more positive mother-child relationship which was reciprocal. The child who greeted mother positively after a brief separation expressed more positive affect to mother

in other situations and was less likely to be reprimanded by her.

Other indicators of emotional status at 3 1/2 were also related to the nature of infant functioning and experience at 18 months. Day care children who showed some emotional difficulties at 3 1/2 (in terms of behavior problems, tantrums, or anxiety during testing) had been less verbal in their infant day care settings and had been less likely to engage their caregivers in play with toys. Their caregivers had been less likely to praise them, to provide cognitive-language stimulation, and more likely to be restrictive. Day care children who at 3 1/2 were less compliant and more difficult for their mothers to manage had been less competent as toddlers in their day care centers in 3 main aspects of their functioning, i.e., in interaction with adults, with peers and with inanimate objects. They had engaged in less peer play, played at a lower developmental level with inanimate objects, and were less verbally responsive to teachers.

These findings suggest that although there were few overall differences between the home and day care samples, infants do differ in their capacities to do well and to profit from infant day care. Individual experiences and behavior in infant day care are more important in predicting overall emotional development than is attendance in infant day care per se. Those who seem to do well as infant/toddlers in day care are better adjusted and have better mother-child relationships two years later.

If infants do differ in vulnerability to daily separation it is important to identify the predisposing variables for heightened vulnerability. A suggestion in this regard is found in a study by Cohen (1978) who found that preterm infants of working mothers had significantly lower Bayley and Gesell scores at 21 months than did home-reared preterm infants. These findings contrast with studies of the

general population which report either no differences in similar measures (e.g., Rubenstein, Yarrow, and Pedersen, 1977; e.g., Cochran, 1977) or differences favoring infants of working mothers (Golden et. al., 1978). Birth weight may be one of several predisposing variables mediating adaptation to infant day care.

For the day care children, one might speculate that early positive mother-infant relationships facilitate a positive adaptation to infant day care, which in turn contributes to continued positive mother-child relationships as the child matures. The issue for future research is to identify the characteristics of the infants and of the mother-infant relationship that predispose a successful adaptation to infant day care and hence to a more favorable eventual outcome.

References

Cochran, M.: A comparison of group day and family childrearing patterns in Sweden. Child Development, 1977, 48, 702-707.

Cohen, S.: Maternal Employment and Mother-Child interaction. Merrill Palmer Quarterly, 1978, 24, 189-198.

Erikson, E.: Identity and the life cycle. Psychological Issues, Monograph 1, 1959.

Golden, M., Rosenbluth, L., Grossi, M., Policare, H., Freeman, H., and Brownlee, E.: The New York City Infant Day Care Study. Medical and Health Research Association of New York City, Inc., New York, 1978.

Rubenstein, J. and Howes, C.: Caregiving and infant behavior in day care and in homes. Developmental Psychology, 1979, 15, 1-24.

Rubenstein, J., Pedersen, F., and Yarrow, L.; What happens when mother is away: a comparison of mothers and substitute caregivers. Developmental Psychology, 1977, 13, 529-530.

Table 1

Indices of Emotional Status in
Day Care and Home Reared Children

Index	Day Care		Home		
	M	SD	M	SD	t
Compliance[a]	.83	.21	.95	.10	1.98*
Behavior Problems[b]	10.2	4.1	6.9	3.7	1.26
Attachment to "Other Than Parents"[c]	.7	.9	1.6	.8	2.46*
Greeting Behavior[d]	2.0	.8	2.1	.9	-.22
Anxiety during Testing[e]	2.9	2.6	2.6	2.2	.35
Separation Behavior[f]	2.1	1.3	2.2	1.3	.10

* $p \leq .05$

a Mean percent of time sampling units containing compliant behavior.

b Mean sum of ratings from Richman and Graham Behavior Problem Scale.

c Mean score across 8 settings.

d Mean based on 3 - point scale indexing positive, mixed or negative greeting.

e Mean score based on sum of 14 possible behavior items.

f Mean scale score (possible range: 1-5).

Table 2

Relationships Between Eighteen Month Measures and Indices of Emotional Status at Age 3 1/2 in Day Care and Home Reared Children [a]

Eighteen Month Measures	Positive Greeting		Behavior Problems		Compliance		Test Anxiety		Tantrums		Difficult to Manage	
	Day Care	Home	Day Care	Home	Day Care	Home	Day Care	Home	Day Care	Home	Day Care	Home
Infant Competence												
Peer play	-	-	-	-	.75**	-	-	-	.38	-	-	-
Developmental level of object play	-	-	-	-.36	.66**	-	-.44	-.39	-	-	-	-.50*
Verbal responsiveness	-	-	-.52	-	.39	-	-	-	-.58*	-	-.63**	-
Spontaneous verbalization	-	-	-.58*	-	-	-	-.36	-	-.39	-	-.57*	-
Sharing with adult	-	-	-.64**	-.36	-	-	-.41	-	-	-.42	-.55*	-
Infant Affect												
Positive affect	.66**	-	-.41	-	.39	-	-	-	-	-.69**	-	-
Self solace	-.69**	-	.41	-	.39	-	-	-	-	.51*	-	-
Cry	-.57*	-	-	-	-	-	-	-	-	.43	-	-
Adult Affect												
Reciprocal smile	.42	-	-.58*	-.41	-	-	-.41	-	-.44	-	-	-
Social play	.70**	-	-	-	-	.38	-	-.41	-	-	-	-
Praise, positive feeling	-	.48*	-	-.55**	.42	.55**	-.82***	-	-	-	-	-.58*
Responsiveness to cry	.53	-	-	-	-	.55**	-	-	-	-	-.43	-
Reprimand	-.48	-	.51	.50*	-	.37	-	-	-	-	-	.70**
Adult Positive Stimulation												
Label/comment	-	-	-	-	-	.38	-.40	-	-.67**	-	-.40	-
Imitate, expand	-	-	-	-.36	-	-	-.56*	-	-.35	-	-.41	-
Contingent talk	-	-	-.52	-.40	-	-	-.42	-	-.47	-	-.60*	-
Facilitate object use	.62*	-	-	-.61**	.48	-	-	-	-	-	-	-.49*
Object play	-	-	-	-	-	-	-	-	-	-.37	-.59*	-
Adult Restrictiveness												
Directions/orders	-	-	-	-	-	.48*	.37	-	.67**	.45	.43	-
Directs use of object	-	-	-	-	-	-	.43	-	.40	-	-	.39
Prohibits	-	-	-	.55**	.47	.50*	-	-	-	-	.42	.65**
Intrudes	-.86***	-	-	-	-	.41	-	-	-	.51*	-	-

Table 2.
Cont'd

a - =r=.35
* p=.10
** p=.05
*** p=.01